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<151> 2000-07-14

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Ala Gly Glu Lys His Cys His Asn Arg Gly Gly Leu His Phe Arg Met
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ctt ccc ctg caa acc tgg cac gta tgc aga caa gca ggg ctc ctc ttt 150
Leu Pro Leu Gln Thr Trp His Val Cys Arg Gln Ala Gly Leu Leu Phe
25 30 35 40

ctg caa act ttg ccc agc aac tct tat tca aat aaa gga gaa act tct 198
Leu Gln Thr Leu Pro Ser Asn Ser Tyr Ser Asn Lys Gly Glu Thr Ser
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Cys Asn Val Arg Pro Ala Cys Thr Asp Lys Asp Tyr Phe Tyr Thr His
         75                  80                  85

acg gcc tgc gat gcc aac gga gag aca caa ctc atg tac aaa tgg gcc   342
Thr Ala Cys Asp Ala Asn Gly Glu Thr Gln Leu Met Tyr Lys Trp Ala
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aag ccg aaa atc tgt agc gag gac ctt gag ggg gca gtg aag ctg cct   390
Lys Pro Lys Ile Cys Ser Glu Asp Leu Glu Gly Ala Val Lys Leu Pro
105                 110                 115                 120

gcc tct ggt gtg aag acc cac tgc cca ccc tgc aac cca ggc ttc ttc   438
Ala Ser Gly Val Lys Thr His Cys Pro Pro Cys Asn Pro Gly Phe Phe
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aaa acc aac aac agc acc tgc cag ccc tgc cca tat ggt tcc tac tcc   486
Lys Thr Asn Asn Ser Thr Cys Gln Pro Cys Pro Tyr Gly Ser Tyr Ser
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aat ggc tca gac tgt acc cgc tgc cct gca ggg act gaa cct gct gtg   534
Asn Gly Ser Asp Cys Thr Arg Cys Pro Ala Gly Thr Glu Pro Ala Val
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gga ttt gaa tac aaa tgg tgg aac acg ctg ccc aca aac atg gaa acg   582
Gly Phe Glu Tyr Lys Trp Trp Asn Thr Leu Pro Thr Asn Met Glu Thr
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acc gtt ctc agt ggg atc aac ttc gag tac aag ggc atg aca ggc tgg   630
Thr Val Leu Ser Gly Ile Asn Phe Glu Tyr Lys Gly Met Thr Gly Trp
185                 190                 195                 200

gag gtg gct ggt gat cac att tac aca gct gct gga gcc tca gac aat   678
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gac ttc atg att ctc act ctg gtt gtg cca gga ttt aga cct ccg cag   726
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tcg gtg atg gca gac aca gag aat aaa gag gtg gcc aga atc aca ttt   774
Ser Val Met Ala Asp Thr Glu Asn Lys Glu Val Ala Arg Ile Thr Phe
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Val Phe Glu Thr Leu Cys Ser Val Asn Cys Glu Leu Tyr Phe Met Val
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ggt gtg aat tct agg acc aac act cct gtg gag acg tgg aaa ggt tcc   870
Gly Val Asn Ser Arg Thr Asn Thr Pro Val Glu Thr Trp Lys Gly Ser
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aaa ggc aaa cag tcc tat acc tac atc att gag gag aac act acc acg   918
Lys Gly Lys Gln Ser Tyr Thr Tyr Ile Ile Glu Glu Asn Thr Thr Thr
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agc ttc acc tgg gcc ttc cag agg acc act ttt cat gag gca agc agg   966
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Lys Tyr Thr Asn Asp Val Ala Lys Ile Tyr Ser Ile Asn Val Thr Asn
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gtt atg aat ggc gtg gcc tcc tac tgc cgt ccc tgt gcc cta gaa gcc   1062
Val Met Asn Gly Val Ala Ser Tyr Cys Arg Pro Cys Ala Leu Glu Ala
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tct gat gtg ggc tcc tcc tgc acc tct tgt cct gct ggt tac tat att   1110
Ser Asp Val Gly Ser Ser Cys Thr Ser Cys Pro Ala Gly Tyr Tyr Ile
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gac cga gat tca gga acc tgc cac tcc tgc ccc cct aac aca att ctg   1158
Asp Arg Asp Ser Gly Thr Cys His Ser Cys Pro Pro Asn Thr Ile Leu
                365                 370                 375

aaa gcc cac cag cct tat ggt gtc cag gcc tgt gtg ccc tgt ggt cca   1206
Lys Ala His Gln Pro Tyr Gly Val Gln Ala Cys Val Pro Cys Gly Pro
            380                 385                 390

ggg acc aag aac aac aag atc cac tct ctg tgc tac aat gat tgc acc   1254
Gly Thr Lys Asn Asn Lys Ile His Ser Leu Cys Tyr Asn Asp Cys Thr
        395                 400                 405

ttc tca cgc aac act cca acc agg act ttc aac tac aac ttc tcc gct   1302
Phe Ser Arg Asn Thr Pro Thr Arg Thr Phe Asn Tyr Asn Phe Ser Ala
    410                 415                 420

ttg gca aac acc gtc act ctt gct gga ggg cca agc ttc act tcc aaa   1350
Leu Ala Asn Thr Val Thr Leu Ala Gly Gly Pro Ser Phe Thr Ser Lys
425                 430                 435                 440

ggg ttg aaa tac ttc cat cac ttt acc ctc agt ctc tgt gga aac cag   1398
Gly Leu Lys Tyr Phe His His Phe Thr Leu Ser Leu Cys Gly Asn Gln
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ggt agg aaa atg tct gtg tgc acc gac aat gtc act gac ctc cgg att   1446
Gly Arg Lys Met Ser Val Cys Thr Asp Asn Val Thr Asp Leu Arg Ile
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cct gag ggt gag tca ggg ttc tcc aaa tct atc aca gcc tac gtc tgc   1494
Pro Glu Gly Glu Ser Gly Phe Ser Lys Ser Ile Thr Ala Tyr Val Cys
        475                 480                 485

cag gca gtc atc atc ccc cca gag gtg aca ggc tac aag gcc ggg gtt   1542
Gln Ala Val Ile Ile Pro Pro Glu Val Thr Gly Tyr Lys Ala Gly Val
    490                 495                 500

tcc tca cag cct gtc agc ctt gct gat cga ctt att ggg gtg aca aca   1590
Ser Ser Gln Pro Val Ser Leu Ala Asp Arg Leu Ile Gly Val Thr Thr
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gat atg act ctg gat gga atc acc tcc cca gct gaa ctt ttc cac ctg   1638
Asp Met Thr Leu Asp Gly Ile Thr Ser Pro Ala Glu Leu Phe His Leu
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gag tcc ttg gga ata ccg gac gtg atc ttc ttt tat agg tcc aat gat   1686
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Val Thr Gln Ser Cys Ser Ser Gly Arg Ser Thr Thr Ile Arg Val Arg
        555                 560                 565

tgc agt cca cag aaa act gtc cct gga agt ttg ctg ctg cca gga acg   1782
Cys Ser Pro Gln Lys Thr Val Pro Gly Ser Leu Leu Leu Pro Gly Thr
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tgc tca gat ggg acc tgt gat ggc tgc aac ttc cac ttc ctg tgg gag   1830
Cys Ser Asp Gly Thr Cys Asp Gly Cys Asn Phe His Phe Leu Trp Glu
585                 590                 595                 600

agc gcg gct gct tgc ccg ctc tgc tca gtg gct gac tac cat gct atc   1878
Ser Ala Ala Ala Cys Pro Leu Cys Ser Val Ala Asp Tyr His Ala Ile
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gtc agc agc tgt gtg gct ggg atc cag aag act act tac gtg tgg cga   1926
Val Ser Ser Cys Val Ala Gly Ile Gln Lys Thr Thr Tyr Val Trp Arg
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gaa ccc aag cta tgc tct ggt ggc att tct ctg cct gag cag aga gtc   1974
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acc atc tgc aaa acc ata gat ttc tgg ctg aaa gtg ggc atc tct gca   2022
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ggc acc tgt act gcc atc ctg ctc acc gtc ttg acc tgc tac ttt tgg   2070
Gly Thr Cys Thr Ala Ile Leu Leu Thr Val Leu Thr Cys Tyr Phe Trp
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aaa aag aat caa aaa cta gag tac aag tac tcc aag ctg gtg atg aat   2118
Lys Lys Asn Gln Lys Leu Glu Tyr Lys Tyr Ser Lys Leu Val Met Asn
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gct act ctc aag gac tgt gac ctg cca gca gct gac agc tgc gcc atc   2166
Ala Thr Leu Lys Asp Cys Asp Leu Pro Ala Ala Asp Ser Cys Ala Ile
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atg gaa ggc gag gat gta gag gac gac ctc atc ttt acc agc aag aat   2214
Met Glu Gly Glu Asp Val Glu Asp Asp Leu Ile Phe Thr Ser Lys Asn
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cac tct ttg gga aga tca aat cat tta cct cca aga gga ctc ctg atg   2262
His Ser Leu Gly Arg Ser Asn His Leu Pro Pro Arg Gly Leu Leu Met
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gat ttg act cag tgc cgc tga agacatcctc aggaggccca gacatggacc      2313
Asp Leu Thr Gln Cys Arg
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Thr Gln Leu Met Tyr Lys Trp Ala Lys Pro Lys Ile Cys Ser Glu Asp
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Pro Cys Pro Tyr Gly Ser Tyr Ser Asn Gly Ser Asp Cys Thr Arg Cys
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Pro Ala Gly Thr Glu Pro Ala Val Gly Phe Glu Tyr Lys Trp Trp Asn
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Thr Leu Pro Thr Asn Met Glu Thr Thr Val Leu Ser Gly Ile Asn Phe
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Glu Tyr Lys Gly Met Thr Gly Trp Glu Val Ala Gly Asp His Ile Tyr
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Thr Ala Ala Gly Ala Ser Asp Asn Asp Phe Met Ile Leu Thr Leu Val
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Cys Arg Pro Cys Ala Leu Glu Ala Ser Asp Val Gly Ser Ser Cys Thr
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Ser Cys Pro Ala Gly Tyr Tyr Ile Asp Arg Asp Ser Gly Thr Cys His
355 360 365

Ser Cys Pro Pro Asn Thr Ile Leu Lys Ala His Gln Pro Tyr Gly Val
370 375 380

Gln Ala Cys Val Pro Cys Gly Pro Gly Thr Lys Asn Asn Lys Ile His
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Ser Leu Cys Tyr Asn Asp Cys Thr Phe Ser Arg Asn Thr Pro Thr Arg
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Gly Gly Pro Ser Phe Thr Ser Lys Gly Leu Lys Tyr Phe His His Phe
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Gly Asn Gly Met Val Ser Arg Cys Ser Arg Ser Gln Asn Thr Val Cys
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Glu Ala Trp Pro Arg Thr Ser Gln Gly Pro Ser Thr Arg Pro Val Glu
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Val Pro Gly Gly Arg Ala Val Ala Ala Ile Leu Gly Leu Gly Leu Val
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Leu Gly Leu Leu Gly Pro Leu Ala Ile Leu Leu Ala Leu Tyr Leu Leu
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     10                  15                  20

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Ile Val Val Met Glu Arg Val Glu Met Pro Thr Ala Gln Pro Ala Leu
 25                  30                  35                  40

ctc gca gta caa aag cag ctg ggg cca cca caa atg tgc aga gtt gca   256
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Cys Thr Cys Ala Val Ile Asn Arg Val Gln Lys Val Asn Cys Thr Pro
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gag gca gat gca ccc aca gtg ccc cct cag gag gcc aca ctt gtt gca   496
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ctg gtg agc agc ctg cta gtg gtg ttt acc ctg gcc ttc ctg ggg ctc   544
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cattgccagc gtggaggttt gctgcagttt gaggctgata aaacagcaaa ggaggaatct 3729

ctcttccccg tgccacccag caaggagacc agtgctgagt cccaagtctc ttgggcccct 3789

ggcagccttg cccagttgtt ctctctggac tctgttccta taccacaaca gcagcagggg 3849

cctgaaatgt ga 3861

<210> 5
<211> 226
<212> PRT
<213> Homo sapiens

<400> 5
Met Ser Thr Gly Thr Asn Gly Asp Gly Val Ser Pro Ala Asn Gly Val
1 5 10 15

Val Leu Asp Arg Ser Tyr Pro Arg Ile Val Val Met Glu Arg Val Glu
20 25 30

Met Pro Thr Ala Gln Pro Ala Leu Leu Ala Val Gln Lys Gln Leu Gly

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        35                  40                  45

Pro Pro Gln Met Cys Arg Val Ala Cys Thr Cys Ala Val Ile Asn Arg
     50                  55                  60

Val Gln Lys Val Asn Cys Thr Pro Thr Ser Asn Ala Val Cys Gly Asp
 65                  70                  75                  80

Cys Leu Pro Arg Phe Tyr Arg Lys Thr Arg Ile Gly Gly Leu Gln Asp
                85                  90                  95

Gln Glu Cys Ile Pro Cys Thr Lys Gln Thr Pro Thr Ser Glu Val Gln
            100                 105                 110

Cys Ala Phe Gln Leu Ser Leu Val Glu Ala Asp Ala Pro Thr Val Pro
        115                 120                 125

Pro Gln Glu Ala Thr Leu Val Ala Leu Val Ser Ser Leu Leu Val Val
    130                 135                 140

Phe Thr Leu Ala Phe Leu Gly Leu Phe Phe Leu Tyr Cys Lys Gln Phe
145                 150                 155                 160

Phe Asn Arg His Cys Gln Arg Gly Gly Leu Leu Gln Phe Glu Ala Asp
                165                 170                 175

Lys Thr Ala Lys Glu Glu Ser Leu Phe Pro Val Pro Pro Ser Lys Glu
            180                 185                 190

Thr Ser Ala Glu Ser Gln Val Ser Trp Ala Pro Gly Ser Leu Ala Gln
        195                 200                 205

Leu Phe Ser Leu Asp Ser Val Pro Ile Pro Gln Gln Gln Gln Gly Pro
    210                 215                 220

Glu Met
225
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<210> 6
<211> 461
<212> PRT
<213> Homo sapiens

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Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu
  1               5                  10                  15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr
             20                  25                  30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln
         35                  40                  45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys
     50                  55                  60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp
 65                  70                  75                  80
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Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys
                85                  90                  95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg
            100                 105                 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu
        115                 120                 125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg
    130                 135                 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val
145                 150                 155                 160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr
                165                 170                 175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly
            180                 185                 190

Asn Ala Ser Arg Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser
        195                 200                 205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser
    210                 215                 220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser
225                 230                 235                 240

Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly
                245                 250                 255

Asp Phe Ala Leu Pro Val Gly Leu Ile Val Gly Val Thr Ala Leu Gly
            260                 265                 270

Leu Leu Ile Ile Gly Val Val Asn Cys Val Ile Met Thr Gln Val Lys
        275                 280                 285

Lys Lys Pro Leu Cys Leu Gln Arg Glu Ala Lys Val Pro His Leu Pro
    290                 295                 300

Ala Asp Lys Ala Arg Gly Thr Gln Gly Pro Glu Gln Gln His Leu Leu
305                 310                 315                 320

Ile Thr Ala Pro Ser Ser Ser Ser Ser Ser Leu Glu Ser Ser Ala Ser
                325                 330                 335

Ala Leu Asp Arg Arg Ala Pro Thr Arg Asn Gln Pro Gln Ala Pro Gly
            340                 345                 350

Val Glu Ala Ser Gly Ala Gly Glu Ala Arg Ala Ser Thr Gly Ser Ser
        355                 360                 365

Asp Ser Ser Pro Gly Gly His Gly Thr Gln Val Asn Val Thr Cys Ile
    370                 375                 380

Val Asn Val Cys Ser Ser Ser Asp His Ser Ser Gln Cys Ser Ser Gln
385                 390                 395                 400
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Ala Ser Ser Thr Met Gly Asp Thr Asp Ser Ser Pro Ser Glu Ser Pro
405 410 415

Lys Asp Glu Gln Val Pro Phe Ser Lys Glu Glu Cys Ala Phe Arg Ser
420 425 430

Gln Leu Glu Thr Pro Glu Thr Leu Leu Gly Ser Thr Glu Glu Lys Pro
435 440 445

Leu Pro Leu Gly Val Pro Asp Ala Gly Met Lys Pro Ser
450 455 460

<210> 7
<211> 159
<212> PRT
<213> Homo sapiens

<400> 7
Met Ser Thr Gly Thr Asn Gly Asp Gly Val Ser Pro Ala Asn Gly Val
1 5 10 15

Val Leu Asp Arg Ser Tyr Pro Arg Ile Val Val Met Glu Arg Val Glu
20 25 30

Met Pro Thr Ala Gln Pro Ala Leu Leu Ala Val Gln Lys Gln Leu Gly
35 40 45

Pro Pro Gln Met Cys Arg Val Ala Cys Thr Cys Ala Val Ile Asn Arg
50 55 60

Val Gln Lys Val Asn Cys Thr Pro Thr Ser Asn Ala Val Cys Gly Asp
65 70 75 80

Cys Leu Pro Arg Phe Tyr Arg Lys Thr Arg Ile Gly Gly Leu Gln Asp
85 90 95

Gln Glu Cys Ile Pro Cys Thr Lys Gln Thr Pro Thr Ser Glu Val Gln
100 105 110

Cys Ala Phe Gln Leu Ser Leu Val Glu Ala Asp Ala Pro Thr Val Pro
115 120 125

Pro Gln Glu Ala Thr Leu Val Ala Leu Val Ser Ser Leu Leu Val Val
130 135 140

Phe Thr Leu Ala Phe Leu Gly Leu Phe Phe Leu Tyr Cys Lys Gln
145 150 155

<210> 8
<211> 342
<212> DNA
<213> Homo sapiens

<220>
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<222> (28)
<223> n equals a,t,g, or c

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<220>
<221> misc_feature
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<223> n equals a,t,g, or c

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<223> n equals a,t,g, or c

<220>
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<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (282)
<223> n equals a,t,g, or c

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ggaccttgag ggggcagtga agctgctngc ntctggtgtn aagacccact gcccaccctg 60

caacccaggc ttcttcaaaa ccaacaacag cacctgccag ccctgcccat atggttccta 120

ctccaatggc tcagactgta cccgctgccc tgcagggact gaacctgctg tgggatttga 180

ntacaaatgg tggaacacgc tgcccacaaa catggaaacg accgttctca gtgggatcaa 240

cttcgagtac aagggcatga caggctggga ggtggntggt gntcacattt acacagctgc 300

tggagcctca gacaatgact tcatgattct aaatctggtt gt 342

<210> 9
<211> 291
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (244)
<223> n equals a, t, g or c

<400> 9
ctcctgtgga gacgtggaaa ggttccaaag gcaaacagtc ctatacctac atcattgagg 60

agaacactac cacgagcttc acctgggcct tccagaggac cacttttcat gaggcaagca 120

ggaagtacac caatgacgtt gccaagatct actccatcaa tgtcaccaat gttatgaatg 180

gcgtggcctc ctactgccgt ccctgtgccc tagaagcctc tgatgtgggc tcctcctgca 240

cctnttgtcc tgctggttac tatattgacc gagattcagg aacctgccac t 291

<210> 10
<211> 267
<212> DNA
<213> Homo sapiens

<220>
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<222> (41)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (171)
<223> n equals a,t,g, or c

<220>
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<222> (207)
<223> n equals a,t,g, or c

<400> 10
ccaagatcta ctccatcaat gtcaccaatg ttatgaatgg ngtggcctcc tactgccgtc 60

cctgtgccct agaagcctct gatgtgggct cctcctgcac ctcttgtcct gctggttact 120

atattgaccg agattcagga acctgccact cctgcccccc taacacaatt ntgaaagccc 180

accagcctta tggtgtccag gcctgtntgc cctgtggtcc agggaccaag aacaacaaga 240

tccactctct gtgctacaat gattgca 267

<210> 11
<211> 274
<212> DNA
<213> Homo sapiens

<220>
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<222> (107)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (196)
<223> n equals a,t,g, or c

<400> 11
aaagaatcaa aaactagagt acaagtactc caagctggtg atgaatgcta ctctcaagga 60

ctgtgacctg ccagcagctg acagctcgcc atcatggaag gcgaggntgt agaggacgac 120

ctcatcttta ccagcaagaa gtcactcttt gggaagatca aatcatttac ctccaagagg 180

actcctgatg gatttnactc agtgccgctg aagacatcct caggaggccc agacatggac 240

ctgtgagagg cactgcctgc ctcacctgct tcct 274

<210> 12
<211> 245
<212> DNA
<213> Homo sapiens

<400> 12
ccaagccgaa aatctgtagc gaggaccttg agggggcagt gaagctgctg cctctggtgt 60

gaagacccac tgcccaccct gcaacccagg cttcttcaaa accaacaaca gcacctgcca 120

gccctgccca tatggttcct actccaatgg ctcagactgt acccgctgcc ctgcagggac 180

tgaacctgct gtgggatttg aatacaaatg gtggaacacg ctgcccacaa acatgggaaa 240

cgacc 245

<210> 13
<211> 292
<212> DNA
<213> Homo sapiens

<220>
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<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (202)
<223> n equals a,t,g, or c

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<221> misc_feature
<222> (245)
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<220>
<221> misc_feature
<222> (246)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (291)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (292)
<223> n equals a,t,g, or c

<400> 13
ggcanaggga atttgactca gtgccgctga agacatcctc aggaggccca gacatggacc 60

tgtgagaggc actgcctgcc tcacctgcct cctcaccttg catagcacct ttgcaagcct 120

gcgggaattt gggtgccagc atcctgcaac acccactgct gggaaatctc ttcattgtgg 180

ccttatcaga tgtttgaatt tnagatcttt ttttatagag tacccaaacc ctccttttctg 240

cttgnntcaa acctgccaaa tatacccaca ctttgtttgt aaaaaaaaaa nn 292

<210> 14
<211> 220
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (164)
<223> n equals a, t, g or c

<400> 14
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atccgcgtca ggtgcagtcc acagaaaact gtccctggaa gtttgctgct gccaggaacg 120

tgctcagatg ggacctgtga tggctgcaac ttccacttcc tgtnggagag cgcggctgct 180

tgcccgctct gctcagtggc tgactaccat gctatcgtca 220

<210> 15
<211> 427
<212> DNA
<213> Homo sapiens

<220>
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<222> (234)
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<220>
<221> misc_feature
<222> (260)
<223> n equals a,t,g, or c

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<222> (268)
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<220>
<221> misc_feature
<222> (271)
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<220>

<221> misc_feature
<222> (272)
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<221> misc_feature
<222> (275)
<223> n equals a,t,g, or c

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<221> misc_feature
<222> (305)
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<222> (308)
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<221> misc_feature
<222> (359)
<223> n equals a,t,g, or c

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<221> misc_feature
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<221> misc_feature
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<220>
<221> misc_feature
<222> (398)
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<220>

<221> misc_feature
<222> (400)
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<220>
<221> misc_feature
<222> (407)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (427)
<223> n equals a,t,g, or c

<400> 15
aattcggcag agctcagaca atgacttcat gattctcact ctgnttgtgc caggatttag 60

acctccgcag tcggtgntgg cagacacaga gaataaagag gtggccagaa tcacatttgt 120

ctttgagacc ctctgttctg tgaactgtga gctctacttc atggtgggtg tggaattcta 180

gggaccaaca cttcctgtgg aggacgtggg aaaggttcca aagggcaaac agtnccttat 240

tacctgacat gcattgaggn aggaacantt nnccnggagg tttcaactgg ggcctttccc 300

gaggnacnac ttttttcatg gagggccaag ncaggggagt tacaacccat tgnacgttng 360

gccaaggntc tnatttccat ncaatgtnca accaatgntn atggaangg tgttggggcc 420

ttgcttn 427

<210> 16
<211> 333
<212> DNA
<213> Homo sapiens

<220>
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<222> (20)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (23)
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<220>
<221> misc_feature
<222> (76)
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<222> (80)
<223> n equals a,t,g, or c

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<222> (85)

<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (103)
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<222> (129)
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<220>
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<222> (152)
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<220>
<221> misc_feature
<222> (171)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (244)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (260)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (269)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (275)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (293)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (307)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (320)
<223> n equals a,t,g, or c

<400> 16

taactctggt tgtcccaggn ttnaaacctc cgcagtcggt gaatggcaga cacagagaat 60

aaagaggtgg ccagantcan atttnttttt aaaaccctct gtnctgtgaa actgtgaagc 120

tctacttgna tggtgggtgt gaaattctag gnaccaacac tcctgtggag nacgtggaaa 180

aggttccaaa ggcaaacagt cctataccta catcattgaa ggaggaacac taccacgagg 240

ttgnacctgg gcccttccan agggaccant tttcnatgag ggcaagcagg gangtacacc 300

attgagngtt gcccaggttn tattccttca atg 333

<210> 17
<211> 70
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (40)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (60)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (66)
<223> n equals a,t,g, or c

<400> 17
ggcacaggca aagattattt ctacacacac acggcctgcn atgccaacgg agagacacan 60

ctcatntaca 70

<210> 18
<211> 568
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (396)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (465)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (472)
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<220>
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<222> (480)
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<220>
<221> misc_feature
<222> (505)
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<220>
<221> misc_feature
<222> (545)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (549)
<223> n equals a,t,g, or c

<400> 18
gcttcagtgt gcttgctcat ggcatgaatg ctatgtggac agcccaagcc atacccagaa 60

tcaccttaat tccaactttt tgaggttcag caattggagg tggcaattgg ctttgcattt 120

taaagtattt cgggtaaagg tgaagtgaag gattttcgtc tttataattt ctgttcggcc 180

atggcaaata ccatagttga gtatttgctt caggagagtt ctttttacag ttttactttt 240

caatgctgag gcatatttct ttgagcactg tgcttttatg tgtctttcta caaaggggtt 300

attggtcagt ggaagaacaa agtacacttg ataaaaacat tttcaacata cattgagcct 360

aaacagcagt taagttgtct ctaaatgaac tagcanaaaa aaaaaatgta gtttttgttt 420

gtaaggaagg ggaggtattt cctgagaatg aatttttttt ttttnggaaa cnggtttctn 480

tccataacct tgcttggatt ttacnggagg gaccctggga aaaaaatttt tcctccaaaa 540

ttttnaaanc cggtttggaa agggttca 568

<210> 19
<211> 554
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (396)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (407)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (473)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (494)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (541)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (542)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (548)
<223> n equals a,t,g, or c

<400> 19

gcttcagtgt gcttgctcat ggcatgaatg ctatgtggac agcccaagcc atacccagaa 60

tcaccttaat tccaactttt tgaggttcag caattggagg tggcaattgg ctttgcattt 120

taaagtattt cgggtaaagg tgaagtgaag gattttcgtc tttataattt ctgttcggcc 180

atggcaaata ccatagttga gtatttgctt caggagagtt ctttttacag ttttactttt 240

caatgctgag gcatatttct ttgagcactg tgcttttatg tgtctttcta caaaggggtt 300

attggtcagt ggaagaacaa agtacacttg ataaaaacat tttcaacata cattgagcct 360

aaacagcagt taagttgtct ctaaatgaac tagcanaaaa aaaaaangta gtttttgttt 420

gtaaggaagg ggaggtattt cctgagaatg aatttttttt tttttggata acnggttttc 480

tctccataaa cctngcttgg attttacagg agggaccctg ggaaaaaaat ttttcctcca 540

nnattttnaa atcc 554

<210> 20
<211> 310
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (83)
<223> n equals a,t,g, or c

<400> 20
ctgagtatgc ctctttctat tgaaatgtca attcaatccc agctttctca ccaccgttcc 60

cctttgattc tttctcaatt gtnttttttgc ctttagctcc cacctataca tctcatgctc 120

agagaaaaac aagttcctta gaggttgtat tctttattct ccaagaatct gtctgaaact 180

tgtacagcta gttcctgtcc cacaactatt aagtggttta ttaagtacat taggcagaat 240

gtgcacttca tcaccaggtt ctagctctgg caaaggagtg ctgtctacag caaggatttt 300

tgcttttaga 310

<210> 21
<211> 546
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (317)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (340)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (351)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (389)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (398)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (428)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (429)
<223> n equals a,t,g, or c

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<222> (433)
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<221> misc_feature
<222> (452)
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<221> misc_feature
<222> (468)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (483)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (534)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (541)
<223> n equals a,t,g, or c

<400> 21
cgcgctgagg tggatttgta ccggagtccc atttgggagc aagagccatc tactcgtccg 60

ttaccggcct tcccaccatg gattgccaag aaaatgagta ctgggaccaa tggggacggt 120

gtgtcacctg ccaacggtgt ggtcctggac aggagctatc caaggattgt ggttatggag 180

agggtggaga tgcctactgc acagcctgcc ctcctcgcag gtacaaaagc agctggggcc 240

accacaaatg tcagagttgc atcacctgtg ctgtcatcaa tcgtgttcag aaggtccaac 300

tgcacagcta acctctnatg ctgtctgtgg ggatgtttgn cccaagttct naccgaaaag 360

acacgccatg ggaaggctgg caggaccang aatggccntc ccgtggcaga aagccagacc 420

ccccaacnnc tgnaggttcc aatgtggcct tnccatttgg aagcttantg ggaaggcaga 480

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gtgtcacctg ccaacggtgt ggtcctggac aggagctatc caaggattgt ggttatggag 180

agggtggaga tgcctactgc acagcctgcc ctcctcgcag tacaaaagca gctggggcca 240

ccacaaatgt cagagttgca tcacctgtgc tgtcatcaat cgtgttcaga aggttcaact 300

gcacagtnac ctctnatgct gtctgtgggg ganggtttgc ccaagtttct aaccgaaaga 360

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tctcccggac tcctgaggtc acatgcgtgg tggtggacgt aagccacgaa gaccctgagg 180

tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240

aggagcagta caacagcacg taccgtgtgg tcagcgtcct caccgtcctg caccaggact 300

ggctgaatgg caaggagtac aagtgcaagg tctccaacaa agccctccca acccccatcg 360

agaaaaccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420

catcccggga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 480

atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga 540

ccacgcctcc cgtgctggac tccgacggct ccttcttcct ctacagcaag ctcaccgtgg 600

acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660

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Met Ala Glu Pro Gly His Ser His His Leu Ser Ala Arg Val Arg Gly
1 5 10 15

aga act gag agg cgc ata ccc cgg ctg tgg cgg ctg ctg ctc tgg gct 153
Arg Thr Glu Arg Arg Ile Pro Arg Leu Trp Arg Leu Leu Leu Trp Ala
20 25 30

ggg acc gcc ttc cag gtg acc cag gga acg gga ccg gag ctt cac gcc 201
Gly Thr Ala Phe Gln Val Thr Gln Gly Thr Gly Pro Glu Leu His Ala
35 40 45

tgc aaa gag tct gag tac cac tat gag tac acg gcg tgt gac agc acg 249
Cys Lys Glu Ser Glu Tyr His Tyr Glu Tyr Thr Ala Cys Asp Ser Thr
50 55 60

ggt tcc agg tgg agg gtc gcc gtg ccg cat acc ccg ggc ctg tgc acc 297
Gly Ser Arg Trp Arg Val Ala Val Pro His Thr Pro Gly Leu Cys Thr
65 70 75 80

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agc ctg cct gac ccc gtc aag ggc acc gag tgc tcc ttc tcc tgc aac   345
Ser Leu Pro Asp Pro Val Lys Gly Thr Glu Cys Ser Phe Ser Cys Asn
                 85                  90                  95

gcc ggg gag ttt ctg gat atg aag gac cag tca tgt aag cca tgc gct   393
Ala Gly Glu Phe Leu Asp Met Lys Asp Gln Ser Cys Lys Pro Cys Ala
            100                 105                 110

gag ggc cgc tac tcc ctc ggc aca ggc att cgg ttt gat gag tgg gat   441
Glu Gly Arg Tyr Ser Leu Gly Thr Gly Ile Arg Phe Asp Glu Trp Asp
        115                 120                 125

gag ctg ccc cat ggc ttt gcc agc ctc tca gcc aac atg gag ctg gat   489
Glu Leu Pro His Gly Phe Ala Ser Leu Ser Ala Asn Met Glu Leu Asp
    130                 135                 140

gac agt gct gct gag tcc acc ggg aac tgt act tcg tcc aag tgg gtt   537
Asp Ser Ala Ala Glu Ser Thr Gly Asn Cys Thr Ser Ser Lys Trp Val
145                 150                 155                 160

ccc cgg ggc gac tac atc gcc ttc aac acg gac gaa tgc aca gcc aca   585
Pro Arg Gly Asp Tyr Ile Ala Phe Asn Thr Asp Glu Cys Thr Ala Thr
                165                 170                 175

ctg atg tac gcc gtc aac ctg aag caa tct ggc acc gtt aac ttc gaa   633
Leu Met Tyr Ala Val Asn Leu Lys Gln Ser Gly Thr Val Asn Phe Glu
            180                 185                 190

tac tac tat cca gac tcc agc atc atc ttt gag ttt ttc gtt cag aat   681
Tyr Tyr Tyr Pro Asp Ser Ser Ile Ile Phe Glu Phe Phe Val Gln Asn
        195                 200                 205

gac cag tgc cag ccc aat gca gat gac tcc agg tgg atg aag acc aca   729
Asp Gln Cys Gln Pro Asn Ala Asp Asp Ser Arg Trp Met Lys Thr Thr
    210                 215                 220

gag aaa gga tgg gaa ttc cac agt gtg gag cta aat cga ggc aat aat   777
Glu Lys Gly Trp Glu Phe His Ser Val Glu Leu Asn Arg Gly Asn Asn
225                 230                 235                 240

gtc ctc tat tgg aga acc aca gcc ttc tca gta tgg acc aaa gta ccc   825
Val Leu Tyr Trp Arg Thr Thr Ala Phe Ser Val Trp Thr Lys Val Pro
                245                 250                 255

aag cct gtg ctg gtg aga aac att gcc ata aca ggg gtg gcc tac act   873
Lys Pro Val Leu Val Arg Asn Ile Ala Ile Thr Gly Val Ala Tyr Thr
            260                 265                 270

tca gaa tgc ttc ccc tgc aaa cct ggc acg tat gca gac aag cag ggc   921
Ser Glu Cys Phe Pro Cys Lys Pro Gly Thr Tyr Ala Asp Lys Gln Gly
        275                 280                 285

tcc tct ttc tgc aaa ctt tgc cca gcc aac tct tat tca aat aaa gga   969
Ser Ser Phe Cys Lys Leu Cys Pro Ala Asn Ser Tyr Ser Asn Lys Gly
    290                 295                 300

gaa act tct tgc cac cag tgt gac cct gac aaa tac tca gag aaa gga   1017
Glu Thr Ser Cys His Gln Cys Asp Pro Asp Lys Tyr Ser Glu Lys Gly
305                 310                 315                 320
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tct tct tcc tgt aac gtg cgc cca gct tgc aca gac aaa gat tat ttc   1065
Ser Ser Ser Cys Asn Val Arg Pro Ala Cys Thr Asp Lys Asp Tyr Phe
                325                 330                 335

tac aca cac acg gcc tgc gat gcc aac gga gag aca caa ctc atg tac   1113
Tyr Thr His Thr Ala Cys Asp Ala Asn Gly Glu Thr Gln Leu Met Tyr
            340                 345                 350

aaa tgg gcc aag ccg aaa atc tgt agc gag gac ctt gag ggg gca gtg   1161
Lys Trp Ala Lys Pro Lys Ile Cys Ser Glu Asp Leu Glu Gly Ala Val
        355                 360                 365

aag ctg cct gcc tct ggt gtg aag acc cac tgc cca ccc tgc aac cca   1209
Lys Leu Pro Ala Ser Gly Val Lys Thr His Cys Pro Pro Cys Asn Pro
    370                 375                 380

ggc ttc ttc aaa acc aac aac agc acc tgc cag ccc tgc cca tat ggt   1257
Gly Phe Phe Lys Thr Asn Asn Ser Thr Cys Gln Pro Cys Pro Tyr Gly
385                 390                 395                 400

tcc tac tcc aat ggc tca gac tgt acc cgc tgc cct gca ggg act gaa   1305
Ser Tyr Ser Asn Gly Ser Asp Cys Thr Arg Cys Pro Ala Gly Thr Glu
                405                 410                 415

cct gct gtg gga ttt gaa tac aaa tgg tgg aac acg ctg ccc aca aac   1353
Pro Ala Val Gly Phe Glu Tyr Lys Trp Trp Asn Thr Leu Pro Thr Asn
            420                 425                 430

atg gaa acg acc gtt ctc agt ggg atc aac ttc gag tac aag ggc atg   1401
Met Glu Thr Thr Val Leu Ser Gly Ile Asn Phe Glu Tyr Lys Gly Met
        435                 440                 445

aca ggc tgg gag gtg gct ggt gat cac att tac aca gct gct gga gcc   1449
Thr Gly Trp Glu Val Ala Gly Asp His Ile Tyr Thr Ala Ala Gly Ala
    450                 455                 460

tca gac aat gac ttc atg att ctc act ctg gtt gtg cca gga ttt aga   1497
Ser Asp Asn Asp Phe Met Ile Leu Thr Leu Val Val Pro Gly Phe Arg
465                 470                 475                 480

cct ccg cag tcg gtg atg gca gac aca gag aat aaa gag gtg gcc aga   1545
Pro Pro Gln Ser Val Met Ala Asp Thr Glu Asn Lys Glu Val Ala Arg
                485                 490                 495

atc aca ttt gtc ttt gag acc ctc tgt tct gtg aac tgt gag ctc tac   1593
Ile Thr Phe Val Phe Glu Thr Leu Cys Ser Val Asn Cys Glu Leu Tyr
            500                 505                 510

ttc atg gtg ggt gtg aat tct agg acc aac act cct gtg gag acg tgg   1641
Phe Met Val Gly Val Asn Ser Arg Thr Asn Thr Pro Val Glu Thr Trp
        515                 520                 525

aaa ggt tcc aaa ggc aaa cag tcc tat acc tac atc att gag gag aac   1689
Lys Gly Ser Lys Gly Lys Gln Ser Tyr Thr Tyr Ile Ile Glu Glu Asn
    530                 535                 540

act acc acg agc ttc acc tgg gcc ttc cag agg acc act ttt cat gag   1737
Thr Thr Thr Ser Phe Thr Trp Ala Phe Gln Arg Thr Thr Phe His Glu
545                 550                 555                 560
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gca agc agg aag tac acc aat gac gtt gcc aag atc tac tcc atc aat   1785
Ala Ser Arg Lys Tyr Thr Asn Asp Val Ala Lys Ile Tyr Ser Ile Asn
                565                 570                 575

gtc acc aat gtt atg aat ggc gtg gcc tcc tac tgc cgt ccc tgt gcc   1833
Val Thr Asn Val Met Asn Gly Val Ala Ser Tyr Cys Arg Pro Cys Ala
            580                 585                 590

cta gaa gcc tct gat gtg ggc tcc tcc tgc acc tct tgt cct gct ggt   1881
Leu Glu Ala Ser Asp Val Gly Ser Ser Cys Thr Ser Cys Pro Ala Gly
        595                 600                 605

tac tat att gac cga gat tca gga acc tgc cac tcc tgc ccc cct aac   1929
Tyr Tyr Ile Asp Arg Asp Ser Gly Thr Cys His Ser Cys Pro Pro Asn
    610                 615                 620

aca att ctg aaa gcc cac cag cct tat ggt gtc cag gcc tgt gtg ccc   1977
Thr Ile Leu Lys Ala His Gln Pro Tyr Gly Val Gln Ala Cys Val Pro
625                 630                 635                 640

tgt ggt cca ggg acc aag aac aac aag atc cac tct ctg tgc tac aat   2025
Cys Gly Pro Gly Thr Lys Asn Asn Lys Ile His Ser Leu Cys Tyr Asn
                645                 650                 655

gat tgc acc ttc tca cgc aac act cca acc agg act ttc aac tac aac   2073
Asp Cys Thr Phe Ser Arg Asn Thr Pro Thr Arg Thr Phe Asn Tyr Asn
            660                 665                 670

ttc tcc gct ttg gca aac acc gtc act ctt gct gga ggg cca agc ttc   2121
Phe Ser Ala Leu Ala Asn Thr Val Thr Leu Ala Gly Gly Pro Ser Phe
        675                 680                 685

act tcc aaa ggg ttg aaa tac ttc cat cac ttt acc ctc agt ctc tgt   2169
Thr Ser Lys Gly Leu Lys Tyr Phe His His Phe Thr Leu Ser Leu Cys
    690                 695                 700

gga aac cag ggt agg aaa atg tct gtg tgc acc gac aat gtc act gac   2217
Gly Asn Gln Gly Arg Lys Met Ser Val Cys Thr Asp Asn Val Thr Asp
705                 710                 715                 720

ctc cgg att cct gag ggt gag tca ggg ttc tcc aaa tct atc aca gcc   2265
Leu Arg Ile Pro Glu Gly Glu Ser Gly Phe Ser Lys Ser Ile Thr Ala
                725                 730                 735

tac gtc tgc cag gca gtc atc atc ccc cca gag gtg aca ggc tac aag   2313
Tyr Val Cys Gln Ala Val Ile Ile Pro Pro Glu Val Thr Gly Tyr Lys
            740                 745                 750

gcc ggg gtt tcc tca cag cct gtc agc ctt gct gat cga ctt att ggg   2361
Ala Gly Val Ser Ser Gln Pro Val Ser Leu Ala Asp Arg Leu Ile Gly
        755                 760                 765

gtg aca aca gat atg act ctg gat gga atc acc tcc cca gct gaa ctt   2409
Val Thr Thr Asp Met Thr Leu Asp Gly Ile Thr Ser Pro Ala Glu Leu
    770                 775                 780

ttc cac ctg gag tcc ttg gga ata ccg gac gtg atc ttc ttt tat agg   2457
Phe His Leu Glu Ser Leu Gly Ile Pro Asp Val Ile Phe Phe Tyr Arg
785                 790                 795                 800
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tcc aat gat gtg acc cag tcc tgc agt tct ggg aga tca acc acc atc   2505
Ser Asn Asp Val Thr Gln Ser Cys Ser Ser Gly Arg Ser Thr Thr Ile
                805                 810                 815

cgc gtc agg tgc agt cca cag aaa act gtc cct gga agt ttg ctg ctg   2553
Arg Val Arg Cys Ser Pro Gln Lys Thr Val Pro Gly Ser Leu Leu Leu
            820                 825                 830

cca gga acg tgc tca gat ggg acc tgt gat ggc tgc aac ttc cac ttc   2601
Pro Gly Thr Cys Ser Asp Gly Thr Cys Asp Gly Cys Asn Phe His Phe
        835                 840                 845

ctg tgg gag agc gcg gct gct tgc ccg ctc tgc tca gtg gct gac tac   2649
Leu Trp Glu Ser Ala Ala Ala Cys Pro Leu Cys Ser Val Ala Asp Tyr
    850                 855                 860

cat gct atc gtc agc agc tgt gtg gct ggg atc cag aag act act tac   2697
His Ala Ile Val Ser Ser Cys Val Ala Gly Ile Gln Lys Thr Thr Tyr
865                 870                 875                 880

gtg tgg cga gaa ccc aag cta tgc tct ggt ggc att tct ctg cct gag   2745
Val Trp Arg Glu Pro Lys Leu Cys Ser Gly Gly Ile Ser Leu Pro Glu
                885                 890                 895

cag aga gtc acc atc tgc aaa acc ata gat ttc tgg ctg aaa gtg ggc   2793
Gln Arg Val Thr Ile Cys Lys Thr Ile Asp Phe Trp Leu Lys Val Gly
            900                 905                 910

atc tct gca ggc acc tgt act gcc atc ctg ctc acc gtc ttg acc tgc   2841
Ile Ser Ala Gly Thr Cys Thr Ala Ile Leu Leu Thr Val Leu Thr Cys
        915                 920                 925

tac ttt tgg aaa aag aat caa aaa cta gag tac aag tac tcc aag ctg   2889
Tyr Phe Trp Lys Lys Asn Gln Lys Leu Glu Tyr Lys Tyr Ser Lys Leu
    930                 935                 940

gtg atg aat gct act ctc aag gac tgt gac ctg cca gca gct gac agc   2937
Val Met Asn Ala Thr Leu Lys Asp Cys Asp Leu Pro Ala Ala Asp Ser
945                 950                 955                 960

tgc gcc atc atg gaa ggc gag gat gta gag gac gac ctc atc ttt acc   2985
Cys Ala Ile Met Glu Gly Glu Asp Val Glu Asp Asp Leu Ile Phe Thr
                965                 970                 975

agc aag aat cac tct ttg gga aga tca aat cat tta cct cca aga gga   3033
Ser Lys Asn His Ser Leu Gly Arg Ser Asn His Leu Pro Pro Arg Gly
            980                 985                 990

ctc ctg atg gat ttg act cag tgc cgc tga agacatcctc aggaggccca     3083
Leu Leu Met Asp Leu Thr Gln Cys Arg
        995                 1000

gacatggacc tgtgagaggc actgcctgcc tcacctgcct cctcaccttg catagcacct 3143

ttgcaagcct gcggcgattt gggtgccagc atcctgcaac acccactgct ggaaatctct 3203

tcattgtggc cttatcagat gtttgaattt cagatctttt tttatagagt acccaaaccc 3263

tcctttctgc ttgcctcaaa cctgccaaat atacccacac tttgtttgta aattaaaaaa 3323
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aaaaaaaaaa a 3334

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Arg Thr Glu Arg Arg Ile Pro Arg Leu Trp Arg Leu Leu Leu Trp Ala
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Gly Thr Ala Phe Gln Val Thr Gln Gly Thr Gly Pro Glu Leu His Ala
        35                  40                  45

Cys Lys Glu Ser Glu Tyr His Tyr Glu Tyr Thr Ala Cys Asp Ser Thr
    50                  55                  60

Gly Ser Arg Trp Arg Val Ala Val Pro His Thr Pro Gly Leu Cys Thr
65                  70                  75                  80

Ser Leu Pro Asp Pro Val Lys Gly Thr Glu Cys Ser Phe Ser Cys Asn
                85                  90                  95

Ala Gly Glu Phe Leu Asp Met Lys Asp Gln Ser Cys Lys Pro Cys Ala
            100                 105                 110

Glu Gly Arg Tyr Ser Leu Gly Thr Gly Ile Arg Phe Asp Glu Trp Asp
        115                 120                 125

Glu Leu Pro His Gly Phe Ala Ser Leu Ser Ala Asn Met Glu Leu Asp
    130                 135                 140

Asp Ser Ala Ala Glu Ser Thr Gly Asn Cys Thr Ser Ser Lys Trp Val
145                 150                 155                 160

Pro Arg Gly Asp Tyr Ile Ala Phe Asn Thr Asp Glu Cys Thr Ala Thr
                165                 170                 175

Leu Met Tyr Ala Val Asn Leu Lys Gln Ser Gly Thr Val Asn Phe Glu
            180                 185                 190

Tyr Tyr Tyr Pro Asp Ser Ser Ile Ile Phe Glu Phe Phe Val Gln Asn
        195                 200                 205

Asp Gln Cys Gln Pro Asn Ala Asp Asp Ser Arg Trp Met Lys Thr Thr
    210                 215                 220

Glu Lys Gly Trp Glu Phe His Ser Val Glu Leu Asn Arg Gly Asn Asn
225                 230                 235                 240

Val Leu Tyr Trp Arg Thr Thr Ala Phe Ser Val Trp Thr Lys Val Pro
                245                 250                 255

Lys Pro Val Leu Val Arg Asn Ile Ala Ile Thr Gly Val Ala Tyr Thr
            260                 265                 270
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Ser Glu Cys Phe Pro Cys Lys Pro Gly Thr Tyr Ala Asp Lys Gln Gly
275 280 285

Ser Ser Phe Cys Lys Leu Cys Pro Ala Asn Ser Tyr Ser Asn Lys Gly
290 295 300

Glu Thr Ser Cys His Gln Cys Asp Pro Asp Lys Tyr Ser Glu Lys Gly
305 310 315 320

Ser Ser Ser Cys Asn Val Arg Pro Ala Cys Thr Asp Lys Asp Tyr Phe
325 330 335

Tyr Thr His Thr Ala Cys Asp Ala Asn Gly Glu Thr Gln Leu Met Tyr
340 345 350

Lys Trp Ala Lys Pro Lys Ile Cys Ser Glu Asp Leu Glu Gly Ala Val
355 360 365

Lys Leu Pro Ala Ser Gly Val Lys Thr His Cys Pro Pro Cys Asn Pro
370 375 380

Gly Phe Phe Lys Thr Asn Asn Ser Thr Cys Gln Pro Cys Pro Tyr Gly
385 390 395 400

Ser Tyr Ser Asn Gly Ser Asp Cys Thr Arg Cys Pro Ala Gly Thr Glu
405 410 415

Pro Ala Val Gly Phe Glu Tyr Lys Trp Trp Asn Thr Leu Pro Thr Asn
420 425 430

Met Glu Thr Thr Val Leu Ser Gly Ile Asn Phe Glu Tyr Lys Gly Met
435 440 445

Thr Gly Trp Glu Val Ala Gly Asp His Ile Tyr Thr Ala Ala Gly Ala
450 455 460

Ser Asp Asn Asp Phe Met Ile Leu Thr Leu Val Val Pro Gly Phe Arg
465 470 475 480

Pro Pro Gln Ser Val Met Ala Asp Thr Glu Asn Lys Glu Val Ala Arg
485 490 495

Ile Thr Phe Val Phe Glu Thr Leu Cys Ser Val Asn Cys Glu Leu Tyr
500 505 510

Phe Met Val Gly Val Asn Ser Arg Thr Asn Thr Pro Val Glu Thr Trp
515 520 525

Lys Gly Ser Lys Gly Lys Gln Ser Tyr Thr Tyr Ile Ile Glu Glu Asn
530 535 540

Thr Thr Thr Ser Phe Thr Trp Ala Phe Gln Arg Thr Thr Phe His Glu
545 550 555 560

Ala Ser Arg Lys Tyr Thr Asn Asp Val Ala Lys Ile Tyr Ser Ile Asn
565 570 575

Val Thr Asn Val Met Asn Gly Val Ala Ser Tyr Cys Arg Pro Cys Ala
580 585 590

Leu Glu Ala Ser Asp Val Gly Ser Ser Cys Thr Ser Cys Pro Ala Gly
595 600 605

Tyr Tyr Ile Asp Arg Asp Ser Gly Thr Cys His Ser Cys Pro Pro Asn
610 615 620

Thr Ile Leu Lys Ala His Gln Pro Tyr Gly Val Gln Ala Cys Val Pro
625 630 635 640

Cys Gly Pro Gly Thr Lys Asn Asn Lys Ile His Ser Leu Cys Tyr Asn
645 650 655

Asp Cys Thr Phe Ser Arg Asn Thr Pro Thr Arg Thr Phe Asn Tyr Asn
660 665 670

Phe Ser Ala Leu Ala Asn Thr Val Thr Leu Ala Gly Gly Pro Ser Phe
675 680 685

Thr Ser Lys Gly Leu Lys Tyr Phe His His Phe Thr Leu Ser Leu Cys
690 695 700

Gly Asn Gln Gly Arg Lys Met Ser Val Cys Thr Asp Asn Val Thr Asp
705 710 715 720

Leu Arg Ile Pro Glu Gly Glu Ser Gly Phe Ser Lys Ser Ile Thr Ala
725 730 735

Tyr Val Cys Gln Ala Val Ile Ile Pro Pro Glu Val Thr Gly Tyr Lys
740 745 750

Ala Gly Val Ser Ser Gln Pro Val Ser Leu Ala Asp Arg Leu Ile Gly
755 760 765

Val Thr Thr Asp Met Thr Leu Asp Gly Ile Thr Ser Pro Ala Glu Leu
770 775 780

Phe His Leu Glu Ser Leu Gly Ile Pro Asp Val Ile Phe Phe Tyr Arg
785 790 795 800

Ser Asn Asp Val Thr Gln Ser Cys Ser Ser Gly Arg Ser Thr Thr Ile
805 810 815

Arg Val Arg Cys Ser Pro Gln Lys Thr Val Pro Gly Ser Leu Leu Leu
820 825 830

Pro Gly Thr Cys Ser Asp Gly Thr Cys Asp Gly Cys Asn Phe His Phe
835 840 845

Leu Trp Glu Ser Ala Ala Ala Cys Pro Leu Cys Ser Val Ala Asp Tyr
850 855 860

His Ala Ile Val Ser Ser Cys Val Ala Gly Ile Gln Lys Thr Thr Tyr
865 870 875 880

Val Trp Arg Glu Pro Lys Leu Cys Ser Gly Gly Ile Ser Leu Pro Glu
885 890 895

Gln Arg Val Thr Ile Cys Lys Thr Ile Asp Phe Trp Leu Lys Val Gly
900 905 910

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Ile Ser Ala Gly Thr Cys Thr Ala Ile Leu Leu Thr Val Leu Thr Cys
        915                 920                 925

Tyr Phe Trp Lys Lys Asn Gln Lys Leu Glu Tyr Lys Tyr Ser Lys Leu
    930                 935                 940

Val Met Asn Ala Thr Leu Lys Asp Cys Asp Leu Pro Ala Ala Asp Ser
945                 950                 955                 960

Cys Ala Ile Met Glu Gly Glu Asp Val Glu Asp Asp Leu Ile Phe Thr
                965                 970                 975

Ser Lys Asn His Ser Leu Gly Arg Ser Asn His Leu Pro Pro Arg Gly
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Leu Leu Met Asp Leu Thr Gln Cys Arg
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<400> 41

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Met Lys Ser Val Leu Tyr Ser Tyr Ile Leu Phe Leu Ser Cys Ile Ile
  1               5                  10                  15

Ile Asn Gly Arg Asp Val Ala Pro Tyr Ala Pro Ser Asn Gly Lys Cys
             20                  25                  30

Lys Asp Asn Glu Tyr Asn Arg His Asn Leu Cys Cys Leu Ser Cys Pro
         35                  40                  45

Pro Gly Thr Tyr Ala Ser Arg Leu Cys Asp Ser Lys Thr Asn Thr Asn
     50                  55                  60

Thr Gln Cys Thr Pro Cys Gly Ser Asp Thr Phe Thr Ser Arg Asn Asn
 65                  70                  75                  80

His Leu Pro Ala Cys Leu Ser Cys Asn Gly Arg Cys Asp Ser Asn Gln
                 85                  90                  95

Val Glu Thr Arg Ser Cys Asn Thr Thr His Asn Arg Ile Cys Asp Cys
            100                 105                 110

Ala Pro Gly Tyr Tyr Cys Leu Leu Lys Gly Ser Gly Cys Lys Ala Cys
        115                 120                 125

Val Ser Gln Thr Lys Cys Gly Ile Gly Tyr Gly Val Ser Gly His Thr
    130                 135                 140

Pro Thr Gly Asp Val Ile Cys Ser Pro Cys Gly Leu Gly Thr Tyr Ser
145                 150                 155                 160

His Thr Val Ser Ser Ala Asp Lys Cys Glu Pro Val Pro Ser Asn Thr
                165                 170                 175

Phe Asn Tyr Ile Asp Val Glu Ile Asn Leu Tyr Pro Val Asn Asp Thr
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            180                 185                 190

Ser Cys Thr Arg Thr Thr Thr Thr Gly Leu Ser Glu Ser Ile Ser Thr
        195                 200                 205

Ser Glu Leu Thr Ile Thr Met Asn His Lys Asp Cys Asp Pro Val Phe
    210                 215                 220

Arg Asp Gly Tyr Phe Ser Val Leu Asn Lys Val Ala Thr Ser Gly Phe
225                 230                 235                 240

Phe Thr Gly Glu Asn Arg Tyr Gln Asn Thr Ser Asn Val Cys Thr Leu
                245                 250                 255

Asn Phe Glu Ile Lys Cys Asn Asn Lys Asp Ser Ser Ser Lys Gln Leu
            260                 265                 270

Thr Lys Thr Lys Asn Asp Thr Ile Met Pro His Ser Glu Thr Val Thr
        275                 280                 285

Leu Val Gly Asp Cys Leu Ser Ser Val Asp Ile Tyr Ile Leu Tyr Ser
    290                 295                 300

Asn Thr Asn Thr Gln Asp Tyr Glu Thr Asp Thr Ile Ser Tyr His Ala
305                 310                 315                 320

Gly Asn Val Leu Asp Val Asp Ser His Met Pro Gly Ser Cys Asp Ile
                325                 330                 335

His Lys Leu Ile Thr Asn Ser Gln Asn Pro Thr His Phe Leu
            340                 345                 350
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<210> 42
<211> 30
<212> DNA
<213> Homo sapiens

<400> 42
gcagcacata tgatggctga gcctgggcac 30

<210> 43
<211> 34
<212> DNA
<213> Homo sapiens

<400> 43
gcagcatcta gagcggcagt gagtcaaatc catc 34

<210> 44
<211> 48
<212> DNA
<213> Homo sapiens

<400> 44
gcagcatcta gaccgccatc atggctgagc ctgggcacag ccaccatc 48

<210> 45
<211> 30
<212> DNA
<213> Homo sapiens

<400> 45
gcagcatcta gagcggcact gagtcaaatc 30

<210> 46
<211> 27
<212> DNA
<213> Homo sapiens

<400> 46
cgcggatcca tggctgagcc tgggcac 27

<210> 47
<211> 57
<212> DNA
<213> Homo sapiens

<400> 47
cgctctagat caagcgtagt ctgggacgtc gtatgggtag cggcactgag tcaaatc 57

<210> 48
<211> 342
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (28)
<223> n equals a,t,g, or c

<220>
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<222> (31)
<223> n equals a,t,g, or c

<220>
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<222> (40)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (181)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (276)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (282)

<223> n equals a,t,g, or c

<400> 48
ggaccttgag ggggcagtga agctgctngc ntctggtgtn aagacccact gcccaccctg 60

caacccaggc ttcttcaaaa ccaacaacag cacctgccag ccctgcccat atggttccta 120

ctccaatggc tcagactgta cccgctgccc tgcagggact gaacctgctg tgggatttga 180

ntacaaatgg tggaacacgc tgcccacaaa catggaaacg accgttctca gtgggatcaa 240

cttcgagtac aagggcatga caggctggga ggtggntggt gntcacattt acacagctgc 300

tggagcctca gacaatgact tcatgattct aaatctggtt gt 342

<210> 49
<211> 291
<212> DNA
<213> Homo sapiens

<220>
<221> misc_difference
<222> (244)
<223> n equals a, t, g or c

<400> 49
ctcctgtgga gacgtggaaa ggttccaaag gcaaacagtc ctatacctac atcattgagg 60

agaacactac cacgagcttc acctgggcct tccagaggac cacttttcat gaggcaagca 120

ggaagtacac caatgacgtt gccaagatct actccatcaa tgtcaccaat gttatgaatg 180

gcgtggcctc ctactgccgt ccctgtgccc tagaagcctc tgatgtgggc tcctcctgca 240

cctnttgtcc tgctggttac tatattgacc gagattcagg aacctgccac t 291

<210> 50
<211> 294
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (75)
<223> n equals a, t, g or c

<400> 50
ggaacgggac cggagcttca cgcctgcaaa gagtctgagt accactatga gtacacggcg 60

tgtgacagca cgggnttcca ggtggagggt cgccgtgccg catacccggg gcctgtgcac 120

cagcctgcct gaccccgtca agggcaccga gtgctccttc tcctgcaacg ccggggagtt 180

tctggatatg aaggaccagt catgtaagcc atgcgctgag ggccgctact ccctcggcac 240

aggcattcgg tttgatgagt gggatgagct tgccccatgg ctttgcagcc tttt 294

<210> 51
<211> 267
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (41)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (171)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (207)
<223> n equals a,t,g, or c

<400> 51
ccaagatcta ctccatcaat gtcaccaatg ttatgaatgg ngtggcctcc tactgccgtc 60

cctgtgccct agaagcctct gatgtgggct cctcctgcac ctcttgtcct gctggttact 120

atattgaccg agattcagga acctgccact cctgcccccc taacacaatt ntgaaagccc 180

accagcctta tggtgtccag gcctgtntgc cctgtggtcc agggaccaag aacaacaaga 240

tccactctct gtgctacaat gattgca 267

<210> 52
<211> 274
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (107)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (196)
<223> n equals a, t, g or c

<400> 52
aaagaatcaa aaactagagt acaagtactc caagctggtg atgaatgcta ctctcaagga 60

ctgtgacctg ccagcagctg acagctcgcc atcatggaag gcgaggntgt agaggacgac 120

ctcatcttta ccagcaagaa gtcactcttt gggaagatca aatcatttac ctccaagagg 180

actcctgatg gatttnactc agtgccgctg aagacatcct caggaggccc agacatggac 240

ctgtgagagg cactgcctgc ctcacctgct tcct 274

<210> 53

<211> 245
<212> DNA
<213> Homo sapiens

<400> 53
ccaagccgaa aatctgtagc gaggaccttg agggggcagt gaagctgctg cctctggtgt 60

gaagacccac tgcccaccct gcaacccagg cttcttcaaa accaacaaca gcacctgcca 120

gccctgccca tatggttcct actccaatgg ctcagactgt acccgctgcc ctgcagggac 180

tgaacctgct gtgggatttg aatacaaatg gtggaacacg ctgcccacaa acatgggaaa 240

cgacc 245

<210> 54
<211> 292
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (5)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (202)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (245)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (246)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (291)
<223> n equals a, t, g or c

<220>
<221> misc_difference
<222> (292)
<223> n equals a, t, g or c

<400> 54
ggcanaggga atttgactca gtgccgctga agacatcctc aggaggccca gacatggacc 60

tgtgagaggc actgcctgcc tcacctgcct cctcaccttg catagcacct ttgcaagcct 120

gcgggaattt gggtgccagc atcctgcaac acccactgct gggaaatctc ttcattgtgg 180

ccttatcaga tgtttgaatt tnagatcttt ttttatagag tacccaaacc ctccttttctg 240

cttgnntcaa acctgccaaa tatacccaca ctttgtttgt aaaaaaaaaa nn 292

<210> 55
<211> 220
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (164)
<223> n equals a, t, g or c

<400> 55
atcttctttt ataggtccaa tgatgtgacc cagtcctgca gttctgggag atcaaccacc 60

atccgcgtca ggtgcagtcc acagaaaact gtccctggaa gtttgctgct gccaggaacg 120

tgctcagatg ggacctgtga tggctgcaac ttccacttcc tgtnggagag cgcggctgct 180

tgcccgctct gctcagtggc tgactaccat gctatcgtca 220

<210> 56
<211> 427
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (44)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (77)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (234)
<223> n equals a, t, g or c

<220>
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<222> (260)
<223> n equals a, t, g or c

<220>
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<222> (268)
<223> n equals a, t, g or c

<220>
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<222> (271)
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<220>
<221> misc_feature

<222> (272)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (275)
<223> n equals a, t, g or c

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<222> (305)
<223> n equals a, t, g or c

<220>
<221> misc_feature
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<220>
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<223> n equals a, t, g or c

<220>
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<222> (355)
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<220>
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<222> (368)
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<220>
<221> misc_feature
<222> (372)
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<220>
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<222> (381)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (388)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (398)
<223> n equals a, t, g or c

<220>
<221> misc_feature

<222> (400)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (407)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (427)
<223> n equals a, t, g or c

<400> 56
aattcggcag agctcagaca atgacttcat gattctcact ctgnttgtgc caggatttag 60

acctccgcag tcggtgntgg cagacacaga gaataaagag gtggccagaa tcacatttgt 120

ctttgagacc ctctgttctg tgaactgtga gctctacttc atggtgggtg tggaattcta 180

gggaccaaca cttcctgtgg aggacgtggg aaaggttcca aagggcaaac agtnccttat 240

tacctgacat gcattgaggn aggaacantt nnccnggagg tttcaactgg ggcctttccc 300

gaggnacnac ttttttcatg gagggccaag ncaggggagt tacaacccat tgnacgttng 360

gccaaggntc tnatttccat ncaatgtnca accaatgntn atggaanggg tgttggggcc 420

ttgcttn 427

<210> 57
<211> 367
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (5)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (55)
<223> n equals a, t, g or c

<220>
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<222> (66)
<223> n equals a, t, g or c

<220>
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<222> (67)
<223> n equals a, t, g or c

<220>
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<222> (116)
<223> n equals a, t, g or c

<220>
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<222> (123)
<223> n equals a, t, g or c

<220>
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<222> (275)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (315)
<223> n equals a, t, g or c

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<222> (340)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (348)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (356)
<223> n equals a, t, g or c

<400> 57
ggcanaggct gagtccaccg ggaactgtac ttcgtccaag tgggttcccc ggggngactt 60

gatcgnntcc aacacggacg aatgcacagc cacactgatg tacgccgtca acctgnaagc 120

agnctggtca ccgttgaact tcggaatact actatccaga ctccatcatc atctttgaag 180

tttttcgttc agaatgacca gtgccagccc aatgcagatg actccaggtg gatgaagacc 240

acagagaaag gatgggaatt ccacagtgtg agctnaaatc gaggcaataa tgtccgttat 300

tgggggaacc acagncttct tcaatgatgg gaccaaagtn acccaagnct gtgctnggtg 360

gaggaaa 367

<210> 58
<211> 333
<212> DNA
<213> Homo sapiens

<220>
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<222> (20)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (23)

<223> n equals a, t, g or c

<220>
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<222> (76)
<223> n equals a, t, g or c

<220>
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<222> (80)
<223> n equals a, t, g or c

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<222> (85)
<223> n equals a, t, g or c

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<222> (103)
<223> n equals a, t, g or c

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<222> (129)
<223> n equals a, t, g or c

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<220>
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<222> (244)
<223> n equals a, t, g or c

<220>
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<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (269)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (275)
<223> n equals a, t, g or c

<220>
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<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (307)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (320)
<223> n equals a, t, g or c

<400> 58
taactctggt tgtcccaggn ttnaaacctc cgcagtcggt gaatggcaga cacagagaat 60

aaagaggtgg ccagantcan atttnttttt aaaaccctct gtnctgtgaa actgtgaagc 120

tctacttgna tggtgggtgt gaaattctag gnaccaacac tcctgtggag nacgtggaaa 180

aggttccaaa ggcaaacagt cctataccta catcattgaa ggaggaacac taccacgagg 240

ttgnacctgg gcccttccan agggaccant tttcnatgag ggcaagcagg gangtacacc 300

attgagngtt gcccaggttn tattccttca atg 333

<210> 59
<211> 70
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (40)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (60)
<223> n equals a, t, g or c

<220>
<221> misc_feature
<222> (66)
<223> n equals a, t, g or c

<400> 59
ggcacaggca aagattattt ctacacacac acggcctgcn atgccaacgg agagacacan 60

ctcatntaca 70

<210> 60
<211> 3152
<212> DNA
<213> Homo sapiens

<400> 60
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cccaccatgg attgccaaga aaatgagtac tgggaccaat ggggacggtg tgtcacctgc 120
caacggtgtg gtcctggaca ggagctatcc aaggattgtg gttatggaga gggtggagat 180

gcctactggc acagcctgcc ctcctcgcag tacaaaagca gctggggcca ccacaaatgt 240
cagagttgca tcacctgtgc tgtcatcaat cgtgttcaga aggtcaactg cacacctacc 300
tctaatgctg tctgtgggga ctgtttgccc aggttctacc gaaagacacg cattggaggc 360
ctgcaggacc aagagtgcat cccgtgcacg aagcagaccc ccacctctga ggttcaatgt 420
gccttccagt tgagcttagt ggaggcagat gcacccacag tgccccctca ggaggccaca 480
cttgttgcac tggtgagcag cctgctagtg gtgtttaccc tggccttcct ggggctcttc 540
ttcctctact gcaagcagtt cttcaacaga cattgccagc gtggaggttt gctgcagttt 600
gaggctgata aaacagcaaa ggaggaatct ctcttccccg tgccacccag caaggagacc 660
agtgctgagt cccaagtctc ttgggccccc ggcagccttg cccagttgtt ctctctggac 720
tctgttccta taccacaaca gcagcagggg cctgaaatgt gatgtccaca agagctaata 780
ccctacagat ggggcatatc ctatcccatc ccaccagagg attgattctc catttcacaa 840
ggactgatct ggagcatttc ttgcttccct gttgtagtct ggggagccag attccacatt 900
catgggacta ccagacatgt tcctagctca acttgattat agagaagagg agagaggaca 960
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ccacactgcc tccctcctca acacacacac acacacatac acacacatat acatagacac 1140
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agtcatgtct cagactgctg cattgcagca tgacgcaggg caaacacttt ccctctagat 1260
ccctggggcc tcaccctgta tttgaggttc tcaccaccct cagcagggag aagggctgaa 1320
gttcgccatt ttggaacctt acagaacatt tctgagccaa agtaatcttc cttctggggc 1380
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ttccccttg attctttctc aattgtcttt ttgcctttag ctcccaccta tacatctcat 1560
gctcagagaa aaacaagttc cttagaggtt gtattcttta ttctccaaga atctgtctga 1620
aacttgtaca gctagttcct gtcccacaac tattaagtgg tttattaagt acattaggca 1680
gaatgtgcac ttcatcacca ggttctagct ctggcaaagg agtgctgtct acagcaagat 1740
ttttgctttt agaattttat taactacatc tcttgggttc atccatctac aaacactgat 1800
taagggcccc tggggcaacc aattgatcag attactaaaa ggacttggga aaaagcaaaa 1860
aggtcccatt gtactggtac tgaggattag aagcaattga aatacaagcc tgtaccaagc 1920
aagcagcctg gccccacaca ggtattagca aatatgtggt aaccaaggtt ttaggccttg 1980
gscyctaggt ttcctgtttt tttttcgttt tggtttccgt tttcgttttt tgcaacaggt 2040
tattcttatc tcactggctt tcactgatca tgtttagacc ttctggtaga agaaataata 2100
tccagacagg ggatgatttg gcttcagcag gctgcaggtg ttcaaaggtt gccatgtggc 2160
tggcagtggt tcaagcccac atttgacact gctgctctag aggaaagata atgatggtaa 2220
cacagtaata ataataataa taacaaaaat atgataaagt gaaagagtag atttctttca 2280
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ttaattccaa ctttttgagg ttcagcaatt ggaggtggca attggctttg cattttaaag 2400
tatttcgggt aaaggtgaag tgaaggattt tcgtctttat aatttctgtt tggccatggc 2460
aaataccata gttgagtatt tgcttcagga gagttctttt tacagtttta cttttcaatg 2520
ctgaggcata tttctttgag cactgtgctt ttatgtgtct ttctacaaag gggttattgg 2580
tcagtggaag aacaaagtac acttgataaa aacattttca acatacattg agcctaaaca 2640
gcagttaagt tgtctctaat gaactagcaa aaaaaaaaaa tgtagttttt gtttgtaagg 2700
aaggggaggt atttcctgag aatgaatttt tttttttttg gattactgtt tttctctcca 2760
tataccttga acttgggatt ttgaacagga gggaagtcct gggaaaaata atttttttccc 2820
tccaagattc tcagatccca ggttaggaaa ggattcagca ctaacagcat aacccctcta 2880
caacatacag ccctgtcaca ttgagatcat aatccctcct gtcccactcc tctctaccaa 2940
ccccacccta ctagctaggt cttcagtgtt ttacattgaa tattggtaca ttttaattat 3000
tttttctcat aaatgggtta tttatagaga ttttgttaac tcttgagcca tatgcatgtg 3060
tagatactgg cagggctatg tttgtttatg atgctctgca aacatttcat attggccaat 3120
aaacagaaat atatccaaaa aaaaaaaaaa aa 3152

<210> 61
<211> 231
<212> PRT
<213> Homo sapiens

<400> 61
Met Asp Cys Gln Glu Asn Glu Tyr Trp Asp Gln Trp Gly Arg Cys Val
1 5 10 15

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Thr Cys Gln Arg Cys Gly Pro Gly Gln Glu Leu Ser Lys Asp Cys Gly
            20                  25                  30

Tyr Gly Glu Gly Gly Asp Ala Tyr Trp His Ser Leu Pro Ser Ser Gln
        35                  40                  45

Tyr Lys Ser Ser Trp Gly His His Lys Cys Gln Ser Cys Ile Thr Cys
    50                  55                  60

Ala Val Ile Asn Arg Val Gln Lys Val Asn Cys Thr Pro Thr Ser Asn
65                  70                  75                  80

Ala Val Cys Gly Asp Cys Leu Pro Arg Phe Tyr Arg Lys Thr Arg Ile
                85                  90                  95

Gly Gly Leu Gln Asp Gln Glu Cys Ile Pro Cys Thr Lys Gln Thr Pro
            100                 105                 110

Thr Ser Glu Val Gln Cys Ala Phe Gln Leu Ser Leu Val Glu Ala Asp
        115                 120                 125

Ala Pro Thr Val Pro Pro Gln Glu Ala Thr Leu Val Ala Leu Val Ser
    130                 135                 140

Ser Leu Leu Val Val Phe Thr Leu Ala Phe Leu Gly Leu Phe Phe Leu
145                 150                 155                 160

Tyr Cys Lys Gln Phe Phe Asn Arg His Cys Gln Arg Gly Gly Leu Leu
                165                 170                 175

Gln Phe Glu Ala Asp Lys Thr Ala Lys Glu Glu Ser Leu Phe Pro Val
            180                 185                 190

Pro Pro Ser Lys Glu Thr Ser Ala Glu Ser Gln Val Ser Trp Ala Pro
        195                 200                 205

Gly Ser Leu Ala Gln Leu Phe Ser Leu Asp Ser Val Pro Ile Pro Gln
    210                 215                 220

Gln Gln Gln Gly Pro Glu Met
225                 230
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